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# Avalanche Notes

U.S. Forest Service  
Westwide Avalanche Network

FEBRUARY 1981

February snowfall was highly variable in the West, with storms favoring a northern track. Ample precipitation fell in the Cascades of Washington and Oregon, but much of this fell as rain. Most of the snowfall there came from the 12th-20th. Alpine Meadows, CA got most of its snowfall in one day, the 25th, when 28 inches fell. Alyeska, AK was snowy most of the month, and Bridger Bowl, MT reported snow almost every day from the 7th-21st. Alta, UT had three big snowdays--the 1st, 21st, and 27th--which totaled 49 inches. Taos, NM failed to pay its dues, so it got only 2 inches for the month. Here are some snowfall figures as a percent of February normals: Alyeska, 109%; Crystal Mt., 64%; Mt. Baker, 56%; Mt. Rainier, 91%; Stevens Pass, 70%; Alpine Meadows, 59%; Mammoth Mt., 28%; Alta, 103%; Bridger Bowl, 146%; Jackson Hole, 59%; Sun Valley, 53%; Aspen, 42%; Berthoud Pass, 57%; Vail, 66%; and Taos, 6%.

Snowfall totals for November-February show that Colorado is now drier this winter compared to the last drought winter, 1976-77. In the San Juan Mts. of southern Colorado, at least one snow course is reading its lowest ever in 44 years of record. Denver has just recorded its second warmest winter in history; 1933-34 was slightly warmer. For the rest of the West, 1976-77 was drier than the current winter.

February's avalanche total was the highest yet this winter. Bridger Bowl and Stevens Pass contributed substantially to the total. Many of those at Stevens Pass fell on the 12th when 19 inches of snow fell. Much of the snowpack in the Intermountain and Rocky Mt. regions consisted of weak depth hoar. This contributed to several serious accidents in February. Three of these resulted in fatalities.

On the 1st, a ski tourer was buried and killed in Big Cottonwood Canyon, UT. He triggered the slide and could not be found by his skiing companions. Two hours later, an avalanche dog made the find. The victim had been buried 5 feet deep. Avalanche warnings were in effect at the time. On the 15th in the Ruby Mts. near Lamoille, NV, a snowmobiler was killed when she was struck by an avalanche triggered by other machines higher on the slope. She and her snowmobile were swept onto a frozen lake which cracked under the weight of the avalanche. The body has not been found. Also on the 15th at Schweitzer Basin, ID, a lone skier triggered a small slide that buried him deeply. Falling and blowing snow quickly obscured the avalanche. For 3 days, searchers combed the ski area and beyond, but to no avail. Finally on the 19th, an avalanche dog found the victim in the old slide debris. He was buried 6 feet deep and wrapped around a tree. On the 22nd, an avalanche in Big Cottonwood Canyon, UT seriously injured three helicopter skiers. The slide caught the three skiers and the guide. The guide hung onto a tree while the other three were swept on a fast ride thru scattered trees. All three suffered broken bones. This slope had been bombed and skied the previous day.

In all, 23 people were caught, 9 wholly or partly buried, 4 injured, and 3 killed during the month. The accident statistics thru February are tabulated below.

## TOTAL AVALANCHES REPORTED

## DAMAGE SUMMARY - THIS WINTER

AREA	THIS MONTH	THIS WINTER	PEOPLE				VEHICLES		AVALANCHE DAMAGED		
			C	B	I	K	B	D	BLDGs	LIFTS	MISC
CENTRAL & SO. ROCKIES	316	671	14	5	1	3	2	0	0	0	0
INTERMOUNTAIN	356	901	28	12	4	3	1	1	0	1	0
WEST COAST	694	1508	11	3	0	0	0	0	0	1	0
ALL AREAS	1366	3080	53	20	5	6	3	1	0	2	0

U.S. FOREST SERVICE  
ALPINE SNOW AND AVALANCHE RESEARCH PROJECT  
RM STATION FORT COLLINS, COLO.

FEBRUARY 1981

ALPINE MEADOWS	• CAL	48
ALYESKA	• ALASKA	67
BACHELOR BUTTE	• ORE	3
CARSON PASS	• CALIF	88
CRYSTAL MTN	• WASH	25
EAGLECREST	• WASH	74
HEAVENLY VALLEY	• CAL	3
KIRKWOOD MDWS	• CAL	22
MAMMOTH MTN	• CALIF	59
MISSION RIDGE	• WASH	51
MT. HOOD MEADOWS		
MT. RAINIER	• WASH	11
MTR ROSE SLIDE	• NV	3
SQUAW VALLEY	• CALIF	1
STEVENSON PASS	• WASH	18
SUGAR BOWL	• CALIF	277
WHITE PASS	• WASH	23

DATA INCOMPLETE OR MISSING  
GE=GREATER THAN OR EQUAL TO  
ALSO OCCURRED ON OTHER DATES

FEBRUARY 1981

SUMMARY OF WEATHER AND SNOW CONDITIONS

AREA	SUMMARY OF WEATHER AND SNOW CONDITIONS										WIND SPEED AND DIRECTION							
	SNOWFALL			WATER EQUIVALENT			SNOW DEPTH				TEMPERATURE			WIND SPEED				
	TOTAL SNOW- FALL IN.	MAX IN.	D IN.	MAX IN.	D IN.	NUMBER OF DAYS GE HR.	D IN.	A IN.	MIN IN.	A IN.	MAX DEGREES F	MEAN MIN DEGREES F	Avg FOR MO. MPH	6-HOUR PERIODS GE 15 20 MPH DIR.	FASTEST A HOUR E			
CENTRAL AND SOUTHERN ROCKY MOUNTAINS																		
ARAPAHOE BASIN, COLO	24.5	.09	11	1.0	.55	21	4	3	0	34	10	28	4.0	16.5M	15	6		
ASSEVERO CREEK, COLO	25.0	.10	8	1.0	.53	10	6	3	1	30	21	28	4.7	19.4M	15	6		
BEAVER CREEK PASS, COLO	27.5	.07	8	1.0	.64	10	7	3	1	40	10	32	5.6	25.6M	15	4		
BERTHOUD-MINES PEAK	1.0	---	---	---	---	---	---	---	---	32	12	29	3.9	14.7M	15	9		
CLIMAX, COLO	1.3	.05	4	1.0	---	---	---	3	1	19	10	13	3.0	25.6M	15	10		
COPPER MTN, COLO	2.4	.06	8	1.0	.71	10	6	6	1	30	10	32	4.4	28.5M	15	6		
CRESTED BUTTE, COLO	8.0	.07	6	1.0	.59	45	2	1	0	30	10	24	2.9	10.9M	15	1		
GOTHIC, COLO	20.5	.08	1.3	1.0	.57	1.0	0.95	1.0	1	31	10	24	4.6	10.8M	15	1		
GOVELAND CLASS U.S. 6	20.5	.09	1.0	1.0	.69	10	4	3	1	33	10	24	2.1	13.8M	15	10		
MARVINE RANCH, COLO	22.6	.07	8	1.0	.65	10	7	4	2	35	12	14	1.8	21.9M	15	10		
MONARCH, COLO	22.5	.08	9	1.0	.70	16	6	4	1	34	11	26	3.7	13.1M	15	10		
MURGATORY, COLO	23.5	.08	12	1.0	.70	20	1.40	2	1	31	0	26	3.3	15.3M	15	10		
SUNLIGHT, COLO	22.5	.07	12	1.0	.48	10	5.0	1	0	34	10	32	2.0	25.2M	15	10		
TAOS, NEW MEXICO	3.5	.05	1.0	1.0	.20	1	0.1	1	0	0	0	22	2.0	12.2M	15	10		
VAIL, COLOR.	35.5	.07	8	1.0	.39	1	5.5	10	4	23	12	36	1.7	23.1M	15	11		
WINTER PARK, COLO	18.0	.06	7	1.0	.57	10	10	5.5	2	27	10	40	2.5	16.6M	15	10		
WOLF CREEK, COLO	19.5	.10	9	1.0	.90	10	4	3	2	52	10	46	2.5	16.3M	15	10		
INTERMOUNTAIN																		
ALTA, UTAH	80.0	.07	19	1.0	5.99	1.31	27	9	4	40	1	45	33.8M	13.7	10			
BIG MOUNTAIN, MONT	43.7	--	14	1.0	5.99	1.31	27	9	4	63	1	40	5.4	30.7M	13.7	10		
BIG SKY, MONT	37.0	--	9	1.0	7.05	2.05	17	12	9	69	17	42	17.6M	20.1M	13	10		
BRIDGER BOWL, MONT	71.0	.08	15	1.0	5.09	1.09	1.09	16	13	83	21	37	13.6M	23.3M	13	10		
JACKSON HOLE 1, WYO	34.0	.12	6	1.0	6.7	1.09	1.09	16	13	68	22	63	19.9M	19.1M	13	10		
SCHWEITZER BASIN, ID	34.0	.05	16	1.0	5.16	1.26	1.31	26	7	52	25	46	18.6M	18.3M	13	10		
SNOW BIRD, UTAH	54.5	.05	16	1.0	4.80	1.14	20	8	4	70	21	41	4.9	35.5M	15.5M	13	10	
SNOW VALLEY, IDAHO	63.0	.08	13	1.0	4.82	1.14	20	8	4	74	14	42	4.5	35.6M	15.4M	13	10	
TETON PASS, WYO	33.5	.08	9	1.0	2.64	.58	1	11	6	1	0	42	2	36	26.0M	12.0M	13	10
WEST COAST																		
ALPENALP, WASH	26.5	.08	18	1.0	2.26	2.42	14	8	7	31	21	15	2.2	41.1M	24.6M	13		
ALPINE MEADOWS, CAL	37.0	.12	15	1.0	2.02	2.51	19	11	9	114	25	96	10.7	28.6M	24.8M	13		
CRYSTAL MTN 1, WASH	20.0	.09	6	1.0	2.40	2.71	15	11	9	58	25	29	4.2	34.9M	25.1M	13		
CRYSTAL MTN 2, WASH	53.0	.13	11	1.0	2.54	2.54	15	11	10	50	1	28	3.0	40.1M	24.9M	13		
HEAVENLY VALLEY, CALIF	32.5	.05	10	1.0	.82	1.82	8.9	1.5	2	76	1	28	4.0	43.0M	16.2M	13		
JUNiper MOUNTAIN, CALIF	8.0	--	4	1.0	2.37	2.75	7	4	4	51	1	36	4.0	29.5M	23.9M	13		
MAMMOTH MINE, CALIF	17.0	.12	8	1.0	4.19	2.70	26	9	4	56	1	28	4.0	34.3M	24.1M	13		
MISSION RIDGE, WASH	25.0	.07	15	1.0	1.70	2.20	17	10	10	79	10	20	6.7	21.6M	21.8M	13		
MT. BAKER, WASH	61.0	.15	11	1.0	1.70	2.00	18	7.0	4	61	16	55	2.0	36.9M	21.5M	13		
MT. HOOD, MDWS, ORE	43.0	.05	11	1.0	1.61	1.61	14	12	9	41	27	13	2.7	35.4M	24.1M	13		
MT. RAINIER, PARADISE	95.0	.17	26	1.0	1.88	3.52	12	14	14	14	1	38	6.0	36.1M	24.1M	13		
MULTORPOR SKI BOWL, OR	16.5	.13	24	1.0	1.08	1.08	10	8	8	84	25	15	1.1	28.9M	18.6M	13		
SNOQUALMIE SUMMIT, WASH	33.0	.16	11	1.0	1.79	2.43	16	11	11	15	1	17	1.7	37.5M	23.6M	13		
SQUAW VALLEY, CALIF	26.0	.12	16	1.0	1.75	1.97	14	7.6	3	70	1	51	4.5	20.1M	32.8M	13		
STEVENS PASS, WASH	59.0	.15	19	1.0	1.61	2.92	16	13	10	9	0	29	2.0	33.0M	28.1M	13		
SUGAR BOWL, CALIF	23.0	.00	14	1.0	.90	1.00	1	1	0	64	0	32	4.7	39.3M	23.6M	13		

-- DATA INCOMPLETE OR MISSING  
-- ONE OR MORE DAYS OF RECORD MISSING--IF AVERAGE VALUE IS ENTERED, LESS THAN 10 DAYS RECORD IS MISSING  
-- IF MISSING, ENTERED IN WIND SPEED COLUMN, LESS THAN 37.6-HOUR PERIODS ARE MISSING  
GE--GREATER THAN OR EQUAL TO